Rolf Alexander
M.D.

From New Zealand, Rolf Alexander went to Prague where he graduated in medicine, and then to many other European universities where he did post-graduate work in analytical psychology, neurology and biochemistry.

His travels, investigations and studies throughout the world formed the background for his original research which resulted in the philosophy of Creative Realism.

Author of *The Power of the Mind*, Dr. Alexander several times astonished the world with his demonstrations to fellow doctors, scientists and journalists, of the ability of the human will to cause cumulus clouds to disintegrate. An article on this, the science of psychokinesis, appeared in the November/December 1955 edition of FLYING SAUCER REVIEW.

THOUGHTS ON UFOS BY DR. ROLF ALEXANDER

Extract from a letter from Derek Dempster

YOU may certainly publish details of General Marshall's conversation with Rolf Alexander. . . .

Rolf and I became very close friends while he was living in England, and following your letter, I decided to look through my file of correspondence with him, which I treasure. I pulled out the following, which I feel might act as an apt post-script to the Gordon Creighton story. It was dated 29th May, 1958, and in it he said:

". . . The trouble is, UFOs alas, are no longer news unless we can manage to land one and have it photographed, and its crew interviewed by the press. This may not be impossible, but no one has managed it yet.

"You see, there is nothing really startling about UFOs when one thinks it out. Without paging the ghost of Mr. Einstein, the time differential throughout the universe is immense. Light is just now arriving at Palomar from some stars which were perhaps formed long before our world took shape, and conceivably, on millions of planets throughout the Universe life has been evolving for millions of years longer than it has on ours.

"*Biological* evolution commences with a single cell and ends with a human brain. Then a new phase of evolution commences — mental evolution. A million years ago the ape-man of South Africa was a highly advanced type in relation to the other apes. In a million years from now what shall *we* be in relation to what we are at present?

"Other planets, millions of years older in evolution than we are, will perhaps have evolved *mental bodies* something like small intense physical fields, containing all the necessary qualities and properties to maintain a complete and uninhibited form of higher consciousness. Bodies adaptable as to shape, and able to travel anywhere at the *speed of thought*. Suppose that you *knew* all this to be factual, and that you had seen the 'field vehicles' formed by these beings in order to enter the atmosphere, just as a fireman might form an asbestos suit to enter a blazing house which would destroy him otherwise. Suppose that you had actually seen them form bodies like ours before your eyes, so that they would have the mechanical apparatus needed to communicate with us, that is, the mechanism of voice. Suppose that they could pick up the symbols of meaning from your own brains, and answer you in your own language. Suppose that you knew that the whole legend of angels and spiritual beings arose from this phenomenon observed in past time, when people were simpler and believed in the evidence of their senses. Well, how would you make others believe you?

"I don't believe that it is very important that people be convinced of anything beyond the range of their understanding, for the only substitute for understanding is superstition and where understanding is lacking, superstition always fills the vacuum. The thing we must do is to gradually increase the span of our understanding from where we are now. An African bushman would find it easier to understand the mathematics of Einstein and Planck and the complicated apparatus at Teddington, than would an earthman to understand the concepts and techniques and developments of intelligences evolved a million years beyond our own.

"To sum up: any intelligent man must realise that this great teeming universe is filled with mysteries and with phenomena far, far beyond our understanding at present. In a thousand years some of these things will be no longer a mystery; in a million years we shall know about many more, but their solution must await the development of our own consciousness, our own capacity to directly understand what we shall see and hear . . . so, as the Cockney would put it: 'Wot the 'ell, Bill, wot the 'ell!' "

Foundations of Orthoteny

By Peter M. Seeviour

Sometime Scholar of St. John's College, Cambridge, our contributor helped to found the Cambridge University Group for the Investigation of Unidentified Flying Objects, of which he is now a committee member.

BECAUSE the solving of statistical problems is often based on intuitive reasoning rather than a rigorous procedure, it is easy to fall into a trap in even fairly simple problems. The more complex a problem becomes naturally the more numerous and complex are the traps. It is dangerous to attempt a short cut which might lead to the wrong answer. Moreover any approximation used is almost useless unless the accuracy of the answer is known. The discrepancies in orthotenic results so far published indicate a more detailed study is required so that further study can be based on a solid foundation.

I will be using the terminology of local orthoteny, the surface being a Euclidean plane and a straight line the shortest distance between two points. If we are considering saucer sightings over a bounded area such as France, global orthoteny only increases the difficulties. If global orthoteny is correct there will still be significance in the lines of local orthoteny, though it will be smaller. The techniques which will be used here can be applied to global orthoteny, although the calculations will be more difficult. I now ask: Do sufficiently well located sightings tend to lie along narrow strips of land? A narrow strip of land is that land lying between two parallel lines which are close together, and this we call a corridor. A straight pencil line will be a corridor roughly, due to the thickness of the lead. All corridors considered here will have a thickness of "w", and some part will lie inside the boundary. Sightings will be represented by points, and, by the phrasing of the question, we can discard those sightings whose positions are not known to within a specified distance. We are now faced with a purely statistical problem. Interpretation of the answer is an entirely separate matter. Variation in population, geography of the land, and an answer as to why these points should lie in corridors only arise if and when an explanation of the results is required.

Suppose there are "n" points, representing sightings, scattered over the area considered. I will call two corridors *equivalent* if they contain exactly the same set of points and no more. This concept of equivalence divides the corridors into mutually exclusive sets of corridors, these sets being called equivalence classes. Any two corridors in an equivalence class are equivalent, and any two in different classes are not equivalent. There will be a finite number of equivalence classes, each containing an infinity of corridors. I will call one corridor *better* than another if the former contains *all* the points which are in the latter, *plus* at least one more point. If a corridor hasn't any better than it, it is called a *best* corridor. If one corridor is taken from each equivalence class whose members are best corridors, these corridors so taken form a complete set of best corridors. It is the properties of any such set we need to examine. How can a complete set of best corridors be picked out?

Selection by practical method

Imagine a corridor with several points inside it. It can be wobbled about a little, without losing any points, though it might, in this wobbling, gain some. Starting from any corridor containing some of the points and wobbling it so that it loses none of them, we can arrive at a corridor "C" with two of its points on one or other of the parallel lines which define C. This derived corridor is either better than or equivalent to the original corridor. Therefore if the original corridor is best, the derived corridor is equivalent to it. What this shows is that we need only consider those corridors with a join of two points as one of their parallel lines. These will include a complete set of best corridors, though at least half will not be best. Notice that it is possible for a corridor to exist which, though equivalent to or better than another corridor, cannot be derived from it by wobbling the latter. Notice also that two lines, or two of Professor Menzel's corridors, have only at most one point in common, but that two best corridors can have more than one. In the July/August issue of FLYING SAUCER REVIEW (see page 6, fig. 1) Jacques Vallée mentions this point, though he regards this as a fault of the corridor as a representation of a straight line. If, instead, the straight line is regarded as a representation of a corridor (the limit as "w" tends to zero), then a more satisfactory picture is drawn.

Following Vallée's course it seems the easiest way to go from here might be to work out an answer by practical experiment. Having plotted all the sightings, draw the joins of all the pairs of points, and the lines parallel to them and a distance "w" from them. If "*n*" is the number of sightings then

$n(n-1)$ corridors have thus been drawn. I have shown that a complete set of best corridors can be extracted from these. First extract all best corridors and then knock out one of any pair which are equivalent. A large number of experiments is done on random sets of n points each, the n points being scattered over the map inside the boundary and the above procedure being carried out on the points. In each experiment a certain number of the best corridors in the complete set have m and only m points in them. They are called *m-point best corridors*. From these experiments can be determined the answer to the question posed in the second paragraph, within the accuracy of the experiments. The number of m-point best corridors we would expect to get from the n saucer sightings would be almost equal to the number of m-point best corridors obtained from all the experiments, divided by the number of experiments performed. The probability of anything happening in a random set of n points is almost equal to the number of times it happens in all the experiments divided by the number of experiments. If results concerned with large m are required they could be extrapolated from similar results for small m, as the number of experiments required becomes too large.

A theoretical solution

To a pure mathematician a purely theoretical solution would be more satisfying than the above practical method. If N(m) is the number of m-point best corridors in a complete set found from any configuration of n points as above, then the set of numbers

$$[N(2), N(3), \ldots N(n),]$$

can have certain sets of values, say

$$[N'(2), N'(3), \ldots N'(n),]$$
$$[N''(3), \ldots N''(n),] \ldots$$

and so on.

For example

$$[\tfrac{1}{2}n(n-1), 0, \ldots 0,]$$

and

$$[0, 0, \ldots 0, 1,]$$

are two possible sets of values. For each set of values the points can vary over a range of relative positions. That means the parameters of each point can vary over a range of values, the ranges being interrelated. There is a certain probability, a multiple integral over the interrelated ranges, that the points lie within this range of positions, and this is the probability that

$$[N(2), N(3), \ldots N(n)]$$

will have the corresponding set of values. In this way it is theoretically possible to calculate the results found by experiment above. At the moment, however, it seems almost impossibly complicated for such an exact answer to be derived. For example, in general three points will lie in a corridor if, choosing any two of the points, the third lies anywhere within the area bounded by the two exterior common tangents to the circles with centres the two chosen points and radius w, and the tangents to each circle from the other point of the pair. The boundary of the map, even if simplified to a circle or a square, makes this area complex, and brings in boundary asymmetries if the points are close to the boundary. This is where global orthoteny would help. At the present time a boundary is the inevitable consequence of incomplete global coverage. If it were possible for a complete watch to be made over all land and sea areas for UFOs we could dispense with a boundary altogether and use the whole surface of the sphere.

It would be useful to select one member of an equivalence class of best corridors as a representative of that class. A good position to select would be that which minimises the sum of the squares of the distances from the points in the corridor to its bisecting line, for all corridors in the class. We could then say that the points in the corridors of the class lie roughly along the line bisecting this selected corridor. It doesn't follow that this bisector is the line of best fit of the points.

Aimé Michel's maps seem to exhibit some form of pattern. Can this be shown true or false? Should we expect "centres of activity", places where many lines almost meet? The most natural way to answer this might seem to be as follows. If I define an "arena" as a small circle of diameter "w", we can ask whether the representative lines formed above tend to intersect, or "enter", an arena. Indeed this is a possible method of approach. However, anyone who studies Projective Geometry will see that a more natural way would be to define a *gate* as two points a small distance "w" apart, which lie on any line through a fixed centre point. An m-line gate is one with m and only m lines passing between the points. A gate can be wobbled so that one or other of its defining points is an intersection of two lines, while not losing any of the lines which passed through it in its original position. Two gates are equivalent if exactly the same set of lines pass through them, and no more. One gate is better than another if it contains all the lines passing through the latter, plus at least one more line. The problem can be solved in a way exactly analogous to that used for corridors. A complete set of best gates is extracted from the set of gates which have one of their defining points as a meet of two lines. Notice here that any two equivalent corridors can be wobbled into one another without losing any of the common lines on the way. This slight loss in "duality" between gates and corridors is due to the introduc-

tion of metrical properties.

There are other problems which could be put forward. It has been suggested that random distributions of points lead to a pattern of lines with a spiky appearance. Are the lines from saucer plots less spikey than one would expect? This would mean they tend to meet in fairly large angles. Of course sooner or later we would find something significant about any map. Any hypothesis must stand the test of time.

Jumping a li.le further ahead now, what conclusions could be drawn if sightings did tend to lie along narrow strips of land, or corridors? In each sighting there are two possibilities. Either the UFO is due to an objective or to a subjective cause. What some people claim is that orthoteny will show the cause to be objective. Can subjective causes tend to lie along corridors? Most sightings are located in towns.*. If the towns themselves showed a tendency to follow corridors then the cause of UFOs could be subjective and they would show the same tendency. Otherwise it seems difficult to explain the UFOs as subjective. But even if the causes are objective why should such a tendency imply that they are intelligently controlled? What is strange is the indication of the improbable six or seven point "line" rather than a slight increase in the three and four point "lines". This suggests that, rather than a weak influence over all sightings there is a stronger influence over a few of them. Whether this influence, if shown to exist, is an alien race would still be a matter of conjecture.

In any problem one must go as far as one can without approximating, and I have tried to do this in the initial problem. It does bring out the mechanics of the problem and leads to a practical solution of a simpler nature than Vallée's. I feel sure a theoretical solution must be built on this foundation.

NOTE

*It is felt that many readers and researchers will disagree with this statement that most sightings are located in towns: the bulk of the evidence I have seen indicates otherwise. It could be that the author is confusing *sightings* with *reports:* more reports are likely to emanate from towns because that is where the greatest number of people congregate.—EDITOR.

The Prime Lever

By the Reverend Guy J. Cyr

IN the September/October 1964 issue of the FLYING SAUCER REVIEW, while commenting on NICAP's report Waveney Girvan hopefully stated: "If NICAP's pressure can open the American door to the truth, then the British door will swing open too."

In my judgment, "NICAP's pressure" will never "open the American door to the truth," for the obvious reason that it is applying the pressure at the wrong place: too near the hinges. In other words, the leaders in this organization are appealing to the legislators of the nation with arguments which are too speculative and nebulous. On the other hand, Senators and Representatives are very practical people who are constantly aware of the wishes of the voters, and the taxpayers who elected them.

Now taxpayers generally evaluate items and events on the dollar-scale, and so the shortest route to their brain passes through their purse. The members of the Senate and House in Washington must be fully conscious of that, and one can easily assume that while going through *The UFO Evidence*, they looked for practical arguments along these lines. Something, in effect, which would amount to political hay or dynamite. True, they found plenty of dynamite: enough to blow the U.S. Air Force into the "neighbouring" galaxy. However, they found no "caps", and dynamite will not explode usefully without these. In other words, it immediately became obvious to them that the NICAP leaders, today as ever, are perfectly harmless because they simply don't know how to use their ammunition.

NICAP argues this way: the UFOs could be mistaken for enemy missiles and thus accidentally trigger a nuclear war. Also, the unprepared public would probably panic when confronted with extraterrestrials and a threat to our way of life. Therefore, the U.S. Air Force should publish what it knows about the UFOs.

A different strategy

However, as a matter of fact these extraterrestrial spaceships and probes have been manoeuvring in our atmosphere for thousands of years and there is not a shred of evidence to show that they ever started a war accidentally or otherwise. On the contrary, since, as our scientists theorize, a nuclear war could bring about the complete destruction of Planet-3, and thus upset the equilibrium in the solar system, it seems logical to conclude that the ufonites, who would know that, would try to prevent or stop such a war. And this can be done more effectively if their presence here is kept an official secret.

As for panic brought on by a sudden confronta-